Configuring SBC for SNMP

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(i) Related articles:

- How to Enable SNMPv3
- How to Configure SNMP Trap Targets
- How to View SNMP Community Information

Overview

This section details SNMP functionality, and how to configure the SBC Core for SNMP.

The SNMP system consists of three parts: SNMP manager, SNMP agent, and MIB. The SNMP manager running on the Network Management System (NMS) collects information about network connectivity, activity, and event by polling managed devices. The SNMP agent exchanges network management information with the SNMP manager. The agent also controls access to the agent's MIB, the collection of objects that can be viewed by the SNMP manager. For MIB details, see MIB Reference.

SNMP uses five basic messages for communication between the manager and agent, one of which is the GET request that is used to query for information on or about a network entity.

As shown in the figure below, the SNMP agent gathers data from the MIB, which is the repository for information about device parameters and network data. The agent also can send traps or notifications of events that happen in the agent to the manager.

- The SNMP manager sends SNMP GET and SNMP GET-NEXT requests to SNMP agent.

- The SNMP agent sends SNMP GET responses back to the SNMP manager.

- The SNMP manager receives SNMP trap messages from the agent.

SNMP traps are messages that notify a manager that an event has occurred on the SBC node. Any event that results in an SNMP trap message is also logged in an event log.

Figure 1: SNMP Manager and Agent
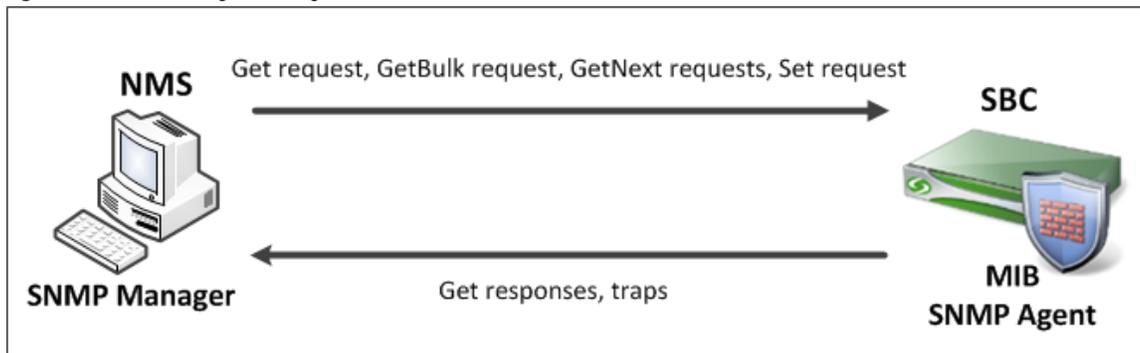
(i) **snmpwalk** is an SNMP application that uses SNMP GETNEXT requests to query a network entity for a tree of information. An object identifier (OID) may be given on the command line. This OID specifies which portion of the object identifier space will be searched using GETNEXT requests. snmpwalk man pages are available on the Internet.

See How to Retrieve Sonus Enterprise MIB OIDs for additional information.

Deploying SNMPv3

When a SBC Core system is deployed in the network along with the EMS, SNMP protocol is used for the following functions:

1. The SBC Core sends traps to the SNMP manager (EMS)

2. The EMS sends SNMP requests to collect real time and periodic statistics

SNMPv3 is used to correct the security deficiencies of SNMPv1/v2 by including three important services: Authentication, Privacy, and Access Control. Secret-Key authentication mechanism in SNMPv3 ensures that a received message is transmitted to the principal whose identifier appears as the source in the message header. In addition, this mechanism ensures that the message was not altered in transit and that it was not artificially delayed or replayed.